

Amendments to the Claims:

The following listing of claims will replace all prior versions and/or listings of claims in the application.

Listing of Claims:

1. (Original): A tetracalcium phosphate (TTCP) particle comprising basic calcium phosphate whiskers on a surface of said TTCP particle; said basic calcium phosphate whiskers having a length up to about 5000 nm and a width up to about 500 nm, said basic calcium phosphate whiskers having a Ca/P molar ratio greater than 1.33, and said basic calcium phosphate whiskers having a non-stoichiometric chemical composition.
2. (Original): The tetracalcium phosphate as defined in claim 1, wherein basic calcium phosphate whiskers have a length from about 1 nm to about 2000 nm and a width from about 1 nm to about 200 nm.
3. (Original): The tetracalcium phosphate as defined in claim 1, wherein said basic calcium phosphate whiskers have a Ca/P molar ratio from about 1.35 to about 4.0.
4. (Original): The tetracalcium phosphate as defined in claim 1, wherein said basic calcium phosphate whiskers are substantially free of a hydroxyapatite phase.
5. (Original): The tetracalcium phosphate as defined in claim 4, wherein said basic calcium phosphate whiskers comprise tetracalcium phosphate as a major phase.
6. (Currently amended): A process for preparing a tetracalcium phosphate (TTCP) powder comprising TTCP particles comprising basic calcium phosphate whiskers on surfaces of said TTCP particles, said process comprising the following steps: a)

mixing a TTCP powder with a whisker-inducing solution so that basic calcium phosphate whiskers start to grow on surfaces of TTCP particles of said TTCP powder;
and b)

terminating the growth of said calcium phosphate whiskers by drying the whisker-inducing solution in the mixture, so that said calcium phosphate whiskers have a length up to about 5000 nm and a width up to about 500 nm, said basic calcium phosphate whiskers have a Ca/P molar ratio greater than 1.33, and said basic calcium phosphate whiskers have a non-stoichiometric chemical composition.

7. (Original): The process as defined in claim 6, wherein basic calcium phosphate whiskers have a length from about 1 nm to about 2000 nm and a width from about 1 nm to about 200 nm.
8. (Original): The process as defined in claim 6, wherein said basic calcium phosphate whiskers have a Ca/P molar ratio from about 1.35 to about 4.0.
9. (Original): The process as defined in claim 6, wherein said basic calcium phosphate whiskers are substantially free of a hydroxyapatite phase.
10. (Original): The process as defined in claim 9, wherein said basic calcium phosphate whiskers comprise tetracalcium phosphate as a major phase.
11. (Currently amended): The process as defined in claim 6, wherein said whisker-inducing solution ~~in step a)~~ is an acidic aqueous solution, a basic aqueous solution, an organic solvent, or substantially pure water.
12. (Currently amended): The process as defined in claim 11, wherein said whisker-inducing solution ~~in step a)~~ is a basic aqueous solution.

13. (Original): The process as defined in claim 12, wherein said basic aqueous solution is a diammonium hydrogen phosphate, Na_2HPO_4 , or K_2HPO_4 aqueous solution.
14. (Currently amended): The process as define in claim 13, wherein said basic aqueous solution is the diammonium hydrogen phosphate aqueous solution, and said diammonium hydrogen phosphate aqueous solution has a concentration of at least 5 wt %, based on the weight of said solution, and the mixing of said TTCP powder with said diammonium hydrogen phosphate aqueous solution ~~in step a)~~ is in a ratio of less than about 10 g powder per ml solution.
15. (Original): The process as defined in claim 14, wherein said concentration is 10-60 wt %, and the mixing ratio is less than about 5 g powder per ml solution.
16. (Original): The process as defined in claim 15, wherein said concentration is about 33 wt %, and the mixing ratio is about 1 gm TTCP per 13 ml solution.
17. (Currently amended): The process as defined in claim 6, wherein said drying ~~in step b)~~ is carried out by heating the mixture resulting from step a) at a temperature less than about 1000°C.
18. (Currently amended): The process as defined in claim 6, wherein said drying ~~in step b)~~ is carried out by separating the mixture resulting from step a) and heating the separated powder at a temperature of 50-500°C.